



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division (7511P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

EPA Reg. Number:

524-653

Date of Issuance:

8/27/2019

NOTICE OF PESTICIDE:

☒ Registration
☐ Reregistration
(under FIFRA, as amended)

Term of Issuance:

Unconditional

Name of Pesticide Product:

LCO Liquid Additive

Name and Address of Registrant (include ZIP Code):

Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, MO 63167 USA

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product, always refer to the above EPA Registration Number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA or the Act).

Registration is in no way to be construed as an endorsement or recommendation of this product by the U.S. Environmental Protection Agency (EPA). In order to protect health and the environment, the Administrator, on his or her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under the Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration or registration review of your product when the EPA requires all registrants of similar products to submit such data.
2. Submit storage stability and corrosion characteristics (Guidelines 830.6317 and 830.6320) data as these data requirements are not satisfied. A one-year study is required to satisfy these data requirements. You have 18 months from the date of this registration to provide these data to the EPA.

Signature of Approving Official:

Andrew Bryceland, Team Leader
Biochemical Pesticides Branch
Biopesticides and Pollution Prevention Division (7511P)
Office of Pesticide Programs

Date:

8/27/2019

3. Make the following labeling change before you release this product for shipment:
 - Revise the EPA Registration Number to read, “EPA Reg. No. 524-653.”
4. Submit one (1) copy of the final printed labeling for the record before you release this product for shipment.

Should you wish to add/retain a reference to your company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the EPA. If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6. A stamped copy of the labeling is enclosed for your records. Please also note that the record for this product currently contains the following acceptable Confidential Statement of Formula (CSF):

- Basic CSF dated 04/16/2018

Any CSFs other than those listed above are superseded.

If you have any questions, please contact Gina Burnett, of my team, by phone at (703) 605-0513 or via email at burnett.gina@epa.gov.

Sincerely,

A handwritten signature in blue ink that reads "Andrew C. Bryceland".

Andrew Bryceland, Team Leader
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

[Type here]

MASTER LABEL FOR EPA REG. No. XXX-XXX

ACCEPTED

08/27/2019

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 524-653

Product Brand Name:
LCO Liquid Additive

Alternate names:

Editorial Notes:

Bold, italicized text is information for the reader and not part of the label.

Bracketed text [] is optional text.

ACTIVE INGREDIENT:

LCO MOR116:

D-Glucose, *O*-6-deoxy-2-*O*-methyl- α -L-galactopyranosyl-(1 \rightarrow 6)-*O*-[*O*-2-deoxy-2-[[[(11*Z*)-1-oxo-11-octadecen-1-yl]amino]- β -D-glucopyranosyl-(1 \rightarrow 4)-*O*-2-(acetylamino)-2-deoxy- β -D-glucopyranosyl-(1 \rightarrow 4)-*O*-2-(acetylamino)-2-deoxy- β -D-glucopyranosyl-(1 \rightarrow 4)-2-(acetylamino)-2-deoxy-

O-2-deoxy-2-[[[(11*Z*)-1-oxo-11-octadecen-1-yl]amino]- β -D-glucopyranosyl-(1 \rightarrow 4)-*O*-2-(acetylamino)-2-deoxy- β -D-glucopyranosyl-(1 \rightarrow 4)-*O*-2-(acetylamino)-2-deoxy- β -D-glucopyranosyl-(1 \rightarrow 4)-*O*-2-(acetylamino)-2-deoxy- β -D-glucopyranosyl-(1 \rightarrow 4)-*O*-[6-deoxy- α -L-galactopyranosyl-(1 \rightarrow 6)]-2-(acetylamino)-2-deoxy-

.....0.0000266%
OTHER INGREDIENTS:..... > 99.9999734%
100.0000000%

Contains 0.0000029 pounds LCO MOR116 per U.S. gallon (0.00035 grams AI/liter)

EPA Reg. No. XXX- XXX

EPA Est. No. [Enter appropriate EPA establishment no.]

KEEP OUT OF REACH OF CHILDREN

CAUTION

HOTLINE NUMBER

In case of an emergency involving this product, or for medical assistance,
call collect, day or night, (314) 694-4000.

For product use information call: 1-877-775-8787

FIRST AID

IF IN EYES

- Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.
- Remove contact lenses, if present, after the first 5 minutes then continue rinsing eye.

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

[Type here]

USER SAFETY RECOMMENDATIONS

- Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Personal Protective Equipment (PPE)

All mixers, loaders, applicators, and other handlers must wear gloves, long-sleeved shirt, long pants, and shoes plus socks.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE

Read the entire label before using this product.

It is a violation of US Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State and Tribe, consult the State/Tribe agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS STATEMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry interval. The requirements in this box apply to uses of this product that are covered by the Worker Protection Standard.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water), is:

- long-sleeved shirt and long pants
- shoes plus socks

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

Product Description

The specific LCO in [INSERT BRAND NAME] has multiple modes of action that stimulate the growth of plant roots, promote nodulation and colonization of *Bradyrhizobium* on the root, and promote mycorrhizal symbiosis in the root zone. The [INSERT BRAND NAME] can also stimulate germination of mycorrhizal

[Type here]

spores. Mycorrhizae are beneficial fungi that colonize plant roots and can form networks in the soil. LCO also induces the process of nodulation on the plant root which enables colonization of *Bradyrhizobium*. Plant roots recognize LCO and other signals produced by the germinating mycorrhizal spores and *Bradyrhizobium* to stimulate root growth. Increased root growth can provide improved access to soil nutrients including nitrogen and water. These modes of action support the growth and yield potential of the crop.

- Promotes nodulation and colonization of *Bradyrhizobium* on the root
- Stimulates germination of mycorrhizal spores
- Enhances interactions between plant roots and microbes which increases root growth as well as nutrient and water uptake through the roots
- Increases yield potential

USE INSTRUCTIONS

[INSERT BRAND NAME] is intended for use as a water-based slurry. Apply using seed treatment application equipment that will provide complete coverage of the seed. [INSERT BRAND NAME] may also be used with inoculants (instructions below).

Shake bottle of [INSERT BRAND NAME] well before using. Ensure that there is a sufficient liquid in the slurry tank to achieve uniform application to seed. Use high quality, properly cleaned seed.

MIXING AND APPLICATION INSTRUCTIONS

Apply [INSERT BRAND NAME] at a rate of 0.34 fl oz/100 lbs seed (0.22 mL/kg seed) while following procedures described above.

Add the [INSERT BRAND NAME] and water, if needed, to the treatment slurry tank. Allow [INSERT BRAND NAME] to disperse completely until a uniform suspension is obtained. Maintain adequate agitation until treatment slurry is applied.

APPLICATION RATE FOR [INSERT BRAND NAME]:

METRIC UNITS

Product Use Rate (ml/kg seed)	Product Use Rate (ml/140,000 seeds)
0.22	5.02

US STANDARD MEASURE

Product Use Rate (fl oz/100 lbs seed)	Product Use Rate (fl oz/140,000 seeds)
0.34	0.17

[INSERT BRAND NAME] USE IN COMBINATION WITH INOCULANTS

[Type here]

[INSERT BRAND NAME] can also be used in conjunction with inoculant products. When combined with *Bradyrhizobium* inoculants, [INSERT BRAND NAME] provides additional improvement in nutrient uptake in the roots. The inoculant does not affect the activity of [INSERT BRAND NAME] when used together.

[For co-packaging with one inoculant, select Applicable Container Size Instructions from List Below]

[6.8 fluid ounces:]

[This product comes packaged with [INSERT INOCULANT BRAND NAME], a microbe based inoculant product. This 6.8 fluid ounce bottle of [INSERT BRAND NAME] is intended to be mixed together with the [INSERT VOLUME] fluid ounces of the inoculant provided to treat 40 units of soybean seed. Mix the entire contents of this product together with the entire contents of the inoculant according to the MIXING AND APPLICATION INSTRUCTIONS on this label to treat 40 units of soybean seed.

Pour the inoculant and [INSERT BRAND NAME] into the slurry tank. Apply to the seed as soon as possible. Do not leave the premix standing in treater mix tank for more than [INSERT NUMBER OF HOURS] hours before use.

Plant within [INSERT NUMBER OF DAYS] days of adding to bare soybean seed.]

[68 fluid ounces:]

[This product comes packaged with [INSERT INOCULANT BRAND NAME], a microbe based inoculant product. This 68 fluid ounce bottle of [INSERT BRAND NAME] is intended to be mixed together with the [INSERT VOLUME] fluid ounces of the inoculant provided to treat 400 units of soybean seed. Mix the entire contents of this product together with the entire contents of the inoculant according to the MIXING AND APPLICATION INSTRUCTIONS on this label to treat 400 units of soybean seed.

Pour the inoculant and [INSERT BRAND NAME] into the slurry tank. Apply to the seed as soon as possible. Do not leave the premix standing in treater mix tank for more than [INSERT NUMBER OF HOURS] hours before use.

Plant within [INSERT NUMBER OF DAYS] days of adding to bare soybean seed.]

[For co-packaging with two inoculants, select Applicable Container Size Instructions from List Below]

[6.8 fluid ounces:]

[This product comes packaged with [INSERT INOCULANT BRAND NAME/S], microbe based inoculant products. This 6.8 fluid ounce bottle of [INSERT BRAND NAME] is intended to be mixed together with the [INSERT VOLUME] fluid ounces of [INSERT BRAND NAME INOCULANT 1] and the [INSERT VOLUME] fluid ounces of [INSERT BRAND NAME INOCULANT 2] provided to treat 40 units of soybean seed. Mix the entire contents of this product together with the entire contents of the inoculants according to the MIXING AND APPLICATION INSTRUCTIONS on this label to treat 40 units of soybean seed.

[Type here]

Pour the inoculants and [INSERT BRAND NAME] into the slurry tank. Apply to the seed as soon as possible. Do not leave the premix standing in treater mix tank for more than [INSERT NUMBER OF HOURS] hours before use.

Plant within [INSERT NUMBER OF DAYS] days of adding to bare soybean seed.]

[68 fluid ounces:]

[This product comes packaged with [INSERT BRAND NAME/S], microbe based inoculant products. This 68 fluid ounce bottle of [INSERT BRAND NAME] is intended to be mixed together with the [INSERT VOLUME] fluid ounces of [INSERT BRAND NAME INOCULANT 1] and the [INSERT VOLUME] fluid ounces of [INSERT BRAND NAME INOCULANT 2] provided to treat 400 units of soybean seed. Mix the entire contents of this product together with the entire contents of the inoculants according to the MIXING AND APPLICATION INSTRUCTIONS on this label to treat 400 units of soybean seed.

Pour the inoculants and [INSERT BRAND NAME] into the slurry tank. Apply to the seed as soon as possible. Do not leave the premix standing in treater mix tank for more than [INSERT NUMBER OF HOURS] hours before use.

Plant within [INSERT NUMBER OF DAYS] days of adding to bare soybean seed.]

For Best Results when using [INSERT BRAND NAME] in combination with inoculants, follow all the directions on the inoculant label.

- Open this product packaging only when ready to use.
- Application with other seed treatments is possible, but may reduce the planting window.
- Double inoculation, the act of using a double application of a *Bradyrhizobium* inoculant, is recommended in certain soil conditions (such as when planting on land previously used for pasture or planting soybeans for the first time). Double inoculation can be achieved by application of any combination of liquids, peat powders, or furrow-applied liquid or granular *Bradyrhizobium* inoculants that are labeled for the target crop.

SEED DYING

All seed commercially treated with this product must be adequately dyed with a suitable color to prevent accidental use as food for humans or feed for animals. Use an EPA-approved dye or colorant that imparts an unnatural color to the seed. Any dye or colorant added to treated seed must be cleared for use pursuant to 40 CFR, Part 153.155.

SEED LABELING

The user is responsible for ensuring that the treated seed container meets all of the requirements under the Federal Seed Act. The Federal Seed Act requires that the container of seed treated with [INSERT BRAND NAME] must be labeled with the following statements:

- This seed has been treated with LCO MOR116.
- Do not use treated seed for food, feed or oil production.

The US Environmental Protection Agency also requires the following statements on the container of seed treated with [INSERT BRAND NAME]:

- Wear long-sleeved shirt, long pants, shoes, socks, and gloves when handling treated seed.
- Store treated seed away from food and feed, and do not allow access by children, pets, or livestock. Do not reuse empty seed containers.

[Type here]

- Surplus treated seed or empty seed containers should be stored or disposed according to local requirements.
- Do not contaminate bodies of water when disposing of excess treated seed or wash waters from planting equipment.

CROP ROTATION

There are no restrictions on crop rotation. All crops can be replanted immediately without restrictions.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage, disposal, or cleaning of equipment.

PESTICIDE STORAGE: Store in original container away from feed and food. Store in a cool, dry place. Do not store in direct sunlight.

PESTICIDE DISPOSAL:

To avoid waste, use all material in this container by application according to label directions. If wastes cannot be avoided, wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING AND DISPOSAL: Non-refillable container (5 gallons (19 liters) or less). Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill, by incineration, or by other procedures allowed by state and local authorities.

[Type here]

LIMITS OF LIABILITY AND WARRANTY

Monsanto Company warrants that this product is reasonably fit for the purposes set forth in the DIRECTIONS FOR USE ("Directions") when used in accordance with those Directions under the conditions described therein. This warranty is also subject to the inherent risks, conditions and limitations stated herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE, INFRINGEMENT (ALONE OR IN COMBINATION WITH OTHER REGISTERED SEED TREATMENT PRODUCTS) OR MERCHANTABILITY IS MADE.

Buyer and all users shall promptly notify Monsanto Company of any claims whether based in contract, negligence, strict liability, other tort or otherwise.

To the extent consistent with applicable law, buyer and all users are responsible for all loss or damage from use or handling of the product which results from conditions beyond the control of Monsanto Company, including, but not limited to, crop injury, ineffectiveness, or other unintended consequences that may result because of factors such as weather conditions at planting, environmental conditions during seed storage, presence of other materials, seed of low quality or low vigor or low germination, or the manner of use or application is inconsistent with that set forth in the Directions.

Monsanto Company does not warrant any product reformulated or repackaged from this product except in accordance with Monsanto Company's stewardship requirements and with Monsanto Company's express written permission.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE LIMIT OF THE LIABILITY OF MONSANTO COMPANY OR ANY OTHER SELLER FOR ANY AND ALL LOSSES, INJURIES OR DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT (INCLUDING CLAIMS BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE) SHALL BE THE PURCHASE PRICE PAID BY THE USER OR BUYER FOR THE QUANTITY OF THIS PRODUCT INVOLVED, OR, AT THE ELECTION OF MONSANTO COMPANY OR ANY OTHER SELLER, THE REPLACEMENT OF SUCH QUANTITY, OR, IF NOT ACQUIRED BY PURCHASE, REPLACEMENT OF SUCH QUANTITY. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, IN NO EVENT SHALL MONSANTO COMPANY OR ANY OTHER SELLER OF THE PRODUCT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, EXEMPLARY, PUNITIVE, SPECIAL OR INDIRECT DAMAGES.

Upon opening and using this product, buyer and all users are deemed to have accepted the terms of this LIMIT OF LIABILITY AND WARRANTY which may not be varied by any verbal or written agreement. If terms are not acceptable, return at once unopened.

EPA Reg. No. XXX-XXX

©[year first published] Monsanto Company

Manufactured for and guaranteed by:

Monsanto Company
800 N. Lindbergh Blvd.
St. Louis, MO 63167 USA

EPA Est. [Enter appropriate EPA establishment no.]

NET [Allow blank space for fill in] GAL [Alternative text: L or other appropriate unit of measure]

[Type here]

LOT NO. *[Allow blank space for fill in]*

[Print Plate Number]

Patents that cover LCO Liquid Additive can be found at <http://www.monsantotechnology.com>.

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